



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

|  |    |  |
|--|----|--|
| (51) International Patent Classification 4 :<br><br>B65D 75/20 | A1 | (11) International Publication Number: WO 88/10219<br><br>(43) International Publication Date: 29 December 1988 (29.12.88) |
|--|----|--|

|   |   |
|---|---|
| (21) International Application Number: PCT/SE88/00341<br><br>(22) International Filing Date: 20 June 1988 (20.06.88)<br><br>(31) Priority Application Number: 8702582-1<br><br>(32) Priority Date: 22 June 1987 (22.06.87)<br><br>(33) Priority Country: SE<br><br>(71) Applicant (for all designated States except US): MÖLN-LYCKE AB [SE/SE]; S-405 03 Gothenburg (SE).<br><br>(72) Inventors; and<br>(75) Inventors/Applicants (for US only) : WIDLUND, Urban [SE/SE]; Pärnvägen 5, S-435 00 Mölnlycke (SE). FRÖIDH, Arne [SE/SE]; Ejdergatan 7, S-444 00 Stenungsund (SE).<br><br>(74) Agents: HJÄRNE, Per-Urban et al.; H. Albihns Patentbyrå AB, Box 3137, S-103 62 Stockholm (SE). | (81) Designated States: AT (European patent), AU, BE (European patent), CH (European patent), DE (European patent), DK, FI, FR (European patent), GB (European patent), HU, IT (European patent), LU (European patent), NL (European patent), NO, SE (European patent), US. |
|---|---|

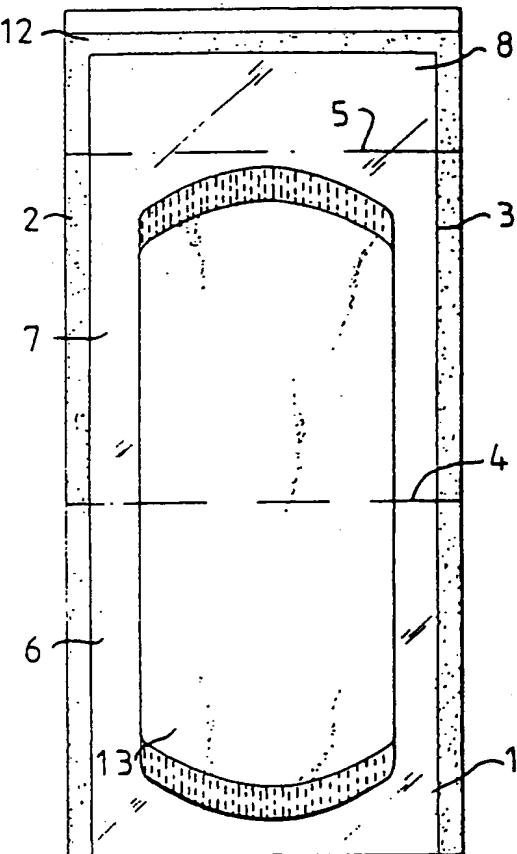
## Published

With international search report.  
In English translation (filed in Swedish).

## (54) Title: PACKAGE FOR SANITARY PADS AND THE LIKE

## (57) Abstract

The present invention relates to a packaging unit which is formed by folding an elongated sheet of material (1) having at least two mutually parallel edges, and which includes a container part (11) and an openable lid or cover flap (8) connected thereto. The inventive packaging unit is characterized in that the sheet (1) has provided along the mutually parallel edges thereof a continuous or broken narrow coating (2, 3) of pressure-sensitive adhesive by means of which the container part (11) is held together, with adhesive surfaces lying against and bonding to adhesive surfaces; and in that the lid (8) is coated at least partially, preferably along its edges, with a pressure-sensitive adhesive (2, 3, 12), so as to enable the lid to be refastened to the outside of the container part (11).



**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

|                                 |   |                             |
|---------------------------------|---|-----------------------------|
| AT Austria                      | FR France                                   | ML Mali                     |
| AU Australia                    | GA Gabon                                    | MR Mauritania               |
| BB Barbados                     | GB United Kingdom                           | MW Malawi                   |
| BE Belgium                      | HU Hungary                                  | NL Netherlands              |
| BG Bulgaria                     | IT Italy                                    | NO Norway                   |
| BJ Benin                        | JP Japan                                    | RO Romania                  |
| BR Brazil                       | KP Democratic People's Republic<br>of Korea | SD Sudan                    |
| CF Central African Republic     | KR Republic of Korea                        | SE Sweden                   |
| CG Congo                        | LI Liechtenstein                            | SN Senegal                  |
| CH Switzerland                  | LK Sri Lanka                                | SU Soviet Union             |
| CM Cameroon                     | LU Luxembourg                               | TD Chad                     |
| DE Germany, Federal Republic of | MC Monaco                                   | TG Togo                     |
| DK Denmark                      | MG Madagascar                               | US United States of America |
| FI Finland                      |   |                             |

Package for sanitary pads and the like.

The present invention relates to a packaging unit formed by folding an elongated sheet of material which has at least two mutually parallel edges and which includes a container part and an openable lid connected thereto.

5

Disposable articles of hygiene, such as diapers and sanitary napkins, have hitherto normally been packaged with several articles in each packaging unit. The trend in recent times, however, has turned progressively towards the packaging of 10 single articles in individual packets. This facilitates the hygienic carriage of single articles for future use, e.g. in a handbag.

It is desirable that used articles of this kind can be 15 disposed of discretely, in a hygienic fashion. Consequently, it is normal to provide a separate disposal bag for each article.

Naturally, the optimum solution in this regard would be to use 20 the packing unit both as a means for packaging the unused article and as an article disposal bag.

A conventional type of packaging unit intended for packaging 25 single articles comprises an elongated rectangular sheet of material which is folded to form a bag-like package with a folded-over lid. These known packaging units are heat welded along the edges and are opened by tearing along the weld seams at the edges at the folded-over edges, so that the lid can be turned back to expose the contents of the package.

30

The main drawback with welded packaging units of this kind is that they cannot be used satisfactorily as disposal bags, since once opened the packages, or packets, cannot be resealed and therefore do not allow a used article to be packaged in an

acceptable manner with regard to hygiene. Furthermore, it is practically impossible to insert a used article into a packaging unit of this kind, since the weld seams tend to burst apart. A used hygienic article is often greatly deformed and therefore requires more space than when new and unused.

The present invention, however, provides a packaging unit of the kind described in the introduction which can be used suitably both for packaging an unused or new article of hygiene and for disposing of the article subsequent to use. The inventive packaging unit is mainly characterized in that the sheet of material has provided along said mutually parallel edges a continuous or broken narrow layer, or strip, of pressure-sensitive adhesive which forms means for joining together the container part of the packaging unit, wherewith adhesive surfaces lie against and adhere to adhesive surfaces, and in that the lid of the packaging unit is at least partially coated with pressure-sensitive adhesive, preferably along its edges, such as to enable the lid to be re-fastened to the outside of the container part of the unit.

Further embodiments and characteristic features are set forth in the following claims.

The pressure-sensitive adhesive used with the inventive packaging unit is one which has a very high self-adhesion but which can be readily loosened or released from other materials, such as plastic materials or paper which has been treated with a release agent. Consequently, extremely strong joins are obtained on the container part of the packaging unit, where adhesive surfaces lie against adhesive surfaces, whereas the same adhesive coating on the lid of said unit enables the lid to be opened and resealed. Since the inventive packaging unit can be resealed, the unit can be used to package a used article in a discrete and hygienic fashion. Even though the article will have an irregular shape and be more voluminous after use than when new, the article can still

be inserted into the packaging unit without risk of the unit bursting at the joins.

Distinct from the known welded packaging units, the inventive packaging unit can be manufactured at very high machine speeds. Furthermore, the invention affords a wider choice of materials, since the material used need not be one that can be welded.

10 An inventive packaging unit will now be described in more detail with reference to exemplifying embodiments illustrated in the accompanying drawing, in which

15 Figure 1 is a view from above of a sheet of material which is intended to be folded into a packaging unit.

Figure 2 illustrates a folded packaging unit.

20 Figure 3 illustrates the positioning of a sanitary towel on a sheet of material prior to folding the sheet to form a package.

Figure 4 is a sectional view, illustrating how the sanitary napkin and the sheet of Figure 3 are folded together to form a package; and

25 Figure 5 illustrates the packaging materials of Figures 3 and 4 when folded to form a package.

The sheet of material shown in Figure 1 is suitably a sheet of plastics material. The sheet 1 has an elongated rectangular shape and is provided with a narrow layer or strip 2, 3 of pressure-sensitive melt glue along each long side thereof. The sheet 1 has been divided into two mutually adjacent parts 6, 7 of equal size and a third part 8 of smaller size, with the aid of first and second fold lines 4, 5.

The packaging unit illustrated in Figure 2 is formed by

folding the two sheet parts 6, 7 of equal size against one another, along the first fold line 4, so that the glue strips 2, 3 are folded over onto themselves and lie glue surface against glue surface. The resultant adhered edges 9, 10 define, together with the first fold line 4, the container part 11 of the packaging unit. The remaining, narrower part 8 of the sheet 1 is then folded down over the container part, so that the glue strips 2, 3 on the unit part 8 adhere to the plastic film on the outside of the container part 11. This downwardly folded part 8 form the lid or cover flap 8 of the packaging unit and can be released easily from the container part 11 and folded away to as to provide access to the contents of the package. The adhesive quality of the melt glue on the lid part of the packaging unit remains intact subsequent to opening the packaging unit, which enables the unit to be resealed if desired.

The only difference between the packaging unit illustrated in Figures 3-5 and the aforedescribed packaging unit illustrated in Figures 1 and 2 is that in addition to extending along the long edges of the sheet 1, the glue coating also extends along the transverse edge 12 which forms one defining edge of the lid 8 in the folded state of the packaging unit. Figure 3 also shows a sanitary towel placed on the flat sheet 1, this towel being folded together with the sheet 1 in the manner described in the foregoing and illustrated in Figure 4. Figure 5 illustrates a complete package with the lid or cover flap raised half-way, to show the glue strips 2, 3, 12. A glue-free gripping surface 14 is provided for facilitating opening of the package, by applying the glue strip 2 adjacent the lower edge of the lid 8 and slightly inwardly of said edge.

The invention shall not be considered to be restricted to the illustrated and described embodiments.

35

The lid or cover flap of the packaging unit may have a shape different to that illustrated, e.g. a triangular shape.

Furthermore, the adhesive coating on the lid may be restricted to one or a few securing points, or may have any desired suitable configuration whatsoever.

- 5 When folding the packaging unit together with a hygiene article, the article may conceivably be allowed to extend substantially along the whole length of the sheet and to be folded down against the outside of the container part of said unit together with the lid. When the lid is provided with a glue coating or strip 12 along its lower edge, in the manner shown in Figures 3-5, the article will be effectively enclosed in the packaging unit, despite projecting from the container part of said unit.
- 10 Naturally, the packaging material and the article may be folded separately and the folded article then inserted into the packaging unit, which is sealed thereafter.

15 The packaging material may also be paper instead of plastic film. In this case, however, it is necessary to treat the area of the lid against which the lid is intended to fasten with a release agent.

20 Other modifications are also conceivable within the scope of  
25 the claims.

## CLAIMS

1. A packaging unit formed by folding an elongated sheet of material (1) having at least two mutually parallel edges, and including container part (11) and an openable lid (8) connected to the container part, characterized in that the sheet (1) has provided along said parallel edges a continuous or broken strip of pressure-sensitive adhesive (2, 3) which forms means for joining together the container part (11), wherewith adhesive surfaces lie against adhesive surfaces, and in that the lid (8) is coated at least partially with a pressure-sensitive adhesive (2, 3, 12) along its edges so as to enable the lid to be refastened to the outside of the container part (11).  
5
2. A packaging unit according to claim 1, characterized in that the sheet (1) is a sheet of plastic film.  
10
3. A packaging unit according to claim 1 or claim 2, characterized in that the sheet (1) is substantially of elongated rectangular shape.  
15
4. A packaging unit according to claim 1 or 2, characterized in that the lid (8) has substantially a triangular shape.  
20
5. A packaging unit according to any of the preceding claims, characterized in that an article of hygiene (13) enclosed in the packaging unit is folded together with the sheet (1) forming said unit, when producing the packaging unit.  
25

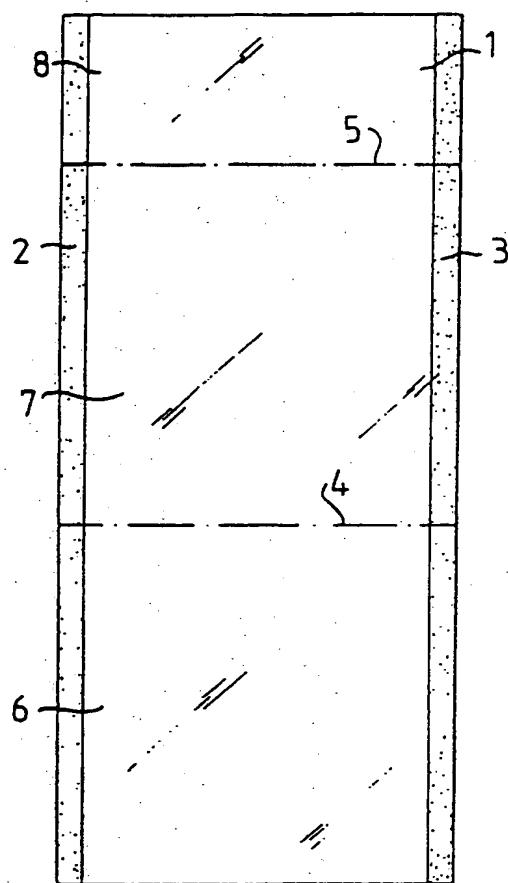


FIG.1

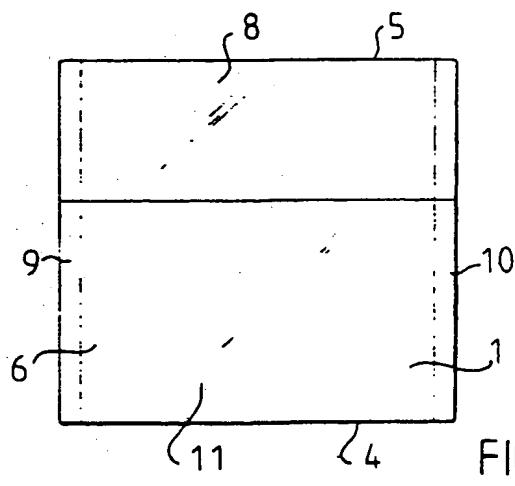


FIG.2

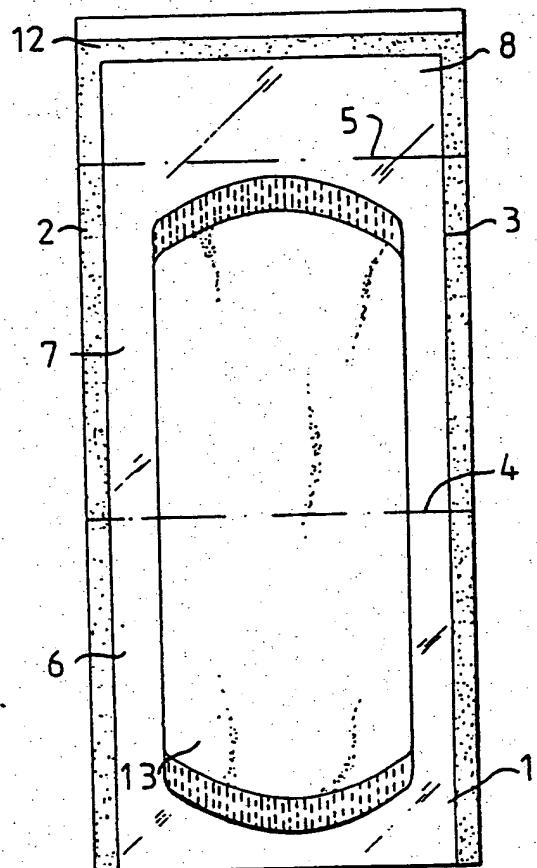


FIG.3&lt;

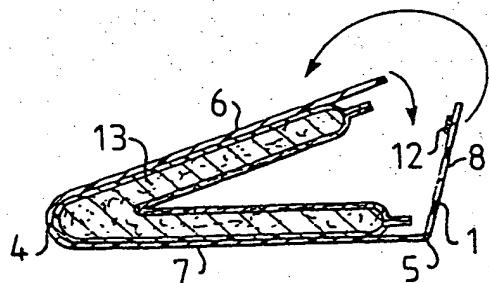


FIG.4

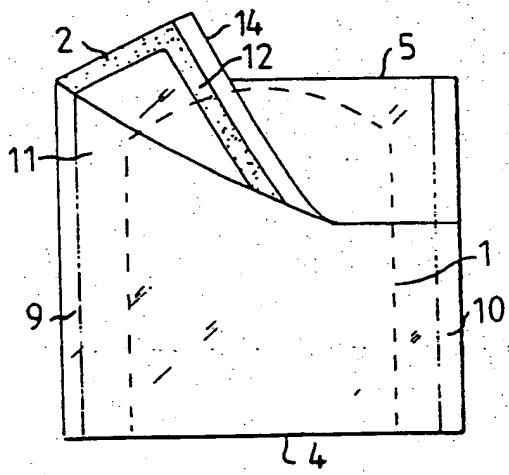


FIG.5

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/SE88/00341

## I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) \*

According to International Patent Classification (IPC) or to both National Classification and IPC 4

B 65 D 75/20

## II. FIELDS SEARCHED

Minimum Documentation Searched ?

| Classification System | Classification Symbols  |
|-----------------------|---|
| IPC 4                 | A 61 F 13/16; B 65 D 27/06, /08, /12, /14, /16, 30/08, /22, 33/18, /20, /22, 65/02, /14, 75/00, /04, /20, /22, /38, 77/04, 85/16, /54 |

Documentation Searched other than Minimum Documentation  
to the Extent that such Documents are Included in the Fields Searched \*

SE, NO, DK, FI classes as above

## III. DOCUMENTS CONSIDERED TO BE RELEVANT \*

| Category * | Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup> | Relevant to Claim No. <sup>13</sup> |
|------------|--|-------------------------------------|
| Y          | US, A, 3 062 371 (DONALD PATIENCE)<br>6 November 1962  | 1-3                                 |
| Y          | US, A, 3 698 549 (GLASSMAN)<br>17 October 1972   | 1-3                                 |
| Y          | GB, A, 2 066 208 (BERNARD SANDERS)<br>8 July 1981<br>EP, 0032006   | 1-4                                 |
| Y          | EP, A1, 0 105 578 (AMF INCORPORATED)<br>18 April 1984<br>& JP, 59059183  | 1-3                                 |
| A          | US, A, 4 556 146 (SWANSON et al)<br>3 December 1985  |                                     |
| A          | US, A, 4 210 248 (ENGDAHL, JR)<br>1 July 1980  |                                     |

\* Special categories of cited documents: <sup>10</sup>

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"Z" document member of the same patent family

## IV. CERTIFICATION

Date of the Actual Completion of the International Search

1988-08-31

Date of Mailing of this International Search Report

1988 -09- 08

International Searching Authority

Swedish Patent Office

Signature of Authorized Officer

## FURTHER INFORMATION CONTINUED FROM THE SECOND SHEET

II

Fields searched (cont)

National C1 81c:27

US C1

128: 286, 290; 206: 438-441, 450, 460,  
472, 473, 475, 491, 492, 494, 525, 828;  
229: 56, 62, 72, 76, 77, 79, 80;  
604: 358-402

V.  OBSERVATIONS WHERE CERTAIN CLAIMS WERE FOUND UNSEARCHABLE<sup>1</sup>

This International search report has not been established in respect of certain claims under Article 17(2) (a) for the following reasons:

1.  Claim numbers ..... because they relate to subject matter not required to be searched by this Authority, namely:

2.  Claim numbers ....., because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3.  Claim numbers....., because they are dependent claims and are not drafted in accordance with the second and third sentences of PCT Rule 6.4(a).

VI.  OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING<sup>2</sup>

This International Searching Authority found multiple inventions in this International application as follows:

1.  As all required additional search fees were timely paid by the applicant, this International search report covers all searchable claims of the International application.

2.  As only some of the required additional search fees were timely paid by the applicant, this International search report covers only those claims of the International application for which fees were paid, specifically claim(s):

3.  No required additional search fees were timely paid by the applicant. Consequently, this International search report is restricted to the invention first mentioned in the claims; it is covered by claim number(s):

4.  As all searchable claims could be searched without effort justifying an additional fee, the International Searching Authority did not invite payment of any additional fee.

## Remark on Protest

The additional search fees were accompanied by applicant's protest.

No protest accompanied the payment of additional search fees.